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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/323,206	06/01/1999	WILLIAM R. BANDY	1689.0010001	8893

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EXAMINER

MYHRE, JAMES W

ART UNIT	PAPER NUMBER
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3622

DATE MAILED: 12/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/323,206

Applicant(s)
Bandy et al

Examiner
James W. Myhre

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Sep 22, 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 92-99, 101-104, and 106-160 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 92-99, 101-103, 106-117, and 158-160 is/are allowed.
- 6) ☒ Claim(s) 104 and 118-157 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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DETAILED ACTION

Response to Amendment

1. The amendment filed on September 22, 2003 under 37 CFR 1.111 is sufficient to overcome the Walter et al (5,856,788) reference.

Allowable Subject Matter

2. Claims 92-99, 101-103, 106-117, and 158-160 contain allowable subject matter.

Statement of the Reasons for the Indication of Allowable Subject Matter

3. The following is a statement of reasons for the indication of allowable subject matter:

While prior art was found which disclosed systems and methods using electronic tags to track and locate items such as luggage (Kaplan et al, US 3, 689,885)(Wade, William, Electronic News) and prior art was also found which disclosed procedures for conflict resolution between multiple tags using random time differentiation to respond to a polling signal (Reis et al, EP 0,467,036)(Walter et al, 5,856,788)(Werb, 6,483,427), prior art was not located in which multiple tags were polled within a specified location to identify the items and which also handled contention between the identity signals from one or more tags within the location by using a secondary identification number stored in each tag. Therefore, the Examiner considers the

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combination of polling a plurality of electronic tags and resolving contention between the tags by the tags responding with a secondary identification code as the novelty of the invention.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 104 and 118-157 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walter et al (5,856,788) in view of Werb (6,483,427).

Claims 104 and 135: Walter discloses an inventory system comprising a plurality of electronic tags and a tag reader (col 3, lines 24-38) which performs multiple reads of the tags to avoid time slot contention (col 3, lines 10-23). Walter further discloses that the tags are identified by a plurality of bits (col 5 and 6, Table 1) and that a different bit is read during each of the multiple read cycles. While Walter does not explicitly disclosed that a plurality of bits are read each time, Werb discloses a similar system and method for inventorying a plurality of electronic tags in which a tag is assigned a Unique Identifying Code (UIC) and that “the tag can be configured to send shorter transmissions more frequently”...”This shorter code might be as short as one bit long, and take just a few milliseconds to transmit” (col 14, lines 41-65). Therefore, it

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would have been obvious to one having ordinary skill in the art that in order to use different parts of the identification number for multiple reads, the identification number could be divided into subsets containing any number of bits from only one bit as Walter discloses to any number less than the total number as Werb discloses. One would have been motivated to use a plurality of bits in order to decrease the time it takes to identify a plurality of items when the identification number consists of a large number of bits as discussed by Werb.

While Walter discloses that a plurality of tags may respond at the same time, Walter does not explicitly disclose the use of “time slots” for the responses. However, Werb discloses using a synchronization signal modified by the tag’s UIC to determine the appropriate time slot in which each tag is to respond as one way to counter receiving signals from two or more tags simultaneously (col 12, line 39 - col 13, line 30). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize such a time slot contention resolution means with Walter’s tags. One would have been motivated to use time slots in order to decrease the chance that a plurality of tags would respond simultaneously.

Claims 118, 136, 155, and 156: Walter and Werb disclose an inventory system as in Claims 104 and 135 above, and Werb further discloses the tag responding within a defined time slot defined by at least a plurality of bits from the UIC (col 12, line 39 - col 13, line 30). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize such a time slot contention resolution means with Walter’s tags.

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One would have been motivated to use time slots in order to decrease the chance that a plurality of tags would respond simultaneously.

Claim 120: Walter and Werb disclose an inventory system as in Claim 104 above. Walter further discloses the tag reader transmitting a first value and a second value of a tag to be located (col 5, lines 6-9 and col 6, lines 10-57), and Werb discloses that the values are a first plurality of bits and a second plurality of bits (col 14, lines 41-65) as discussed in Claim 104 above.

Claim 121: Walter and Werb disclose an inventory system as in Claim 120 above, and Walter further discloses the tag responding by transmitting its first and second plurality of bits when they correspond to the values transmitted by the tag reader (col 6, lines 10-57).

Claim 122: Walter and Werb disclose an inventory system as in Claim 121 above, and Walter further discloses the tag including a third plurality of bits, the tag reader transmitting the third plurality of bits to the tag, and the tag responding with the third plurality of bits when they correspond to the value transmitted by the tag reader (col 6, lines 10-57).

Claims 119, 123, and 137: Walter and Werb disclose an inventory system as in Claims 104, 121, and 135 above, and Walter further discloses that RFID tags including a sensor (the tags “sense” the Awake and Sleep signals)(col 1, col 60-62 and col 2, lines 40-42).

Claims 124 and 138: Walter and Werb disclose an inventory system as in Claims 104 and 135 above, and Walter further discloses that the tag(s) are “connected to any object desired” (col 4, lines 45-53) and uses as an example a biological sample carried in a “flask, vile, case, pouch, or other container”. Werb also discloses that the tags “are attached to people and/or items being

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tracked” (col 3, lines 54-55). While neither reference explicitly discloses that the object/item to which the tag is attached is a product to be sold (i.e. merchandise), it would have been obvious to one having ordinary skill in the art at the time the invention was made to attach inventory tags to such items. One would have been motivated to attach tags to merchandise in order to facilitate the inventory of such objects and in view of Walter’s disclosure that the tags could be attached to any desired object.

Claims 125, 127, and 139: Walter and Verb disclose an inventory system as in Claims 104, 124, and 138 above, but neither reference explicitly discloses if the type of material being used in the manufacture of the tags is flexible or inflexible. However, since no reason is given in the claims of why the substrate material needs to be flexible and this flexibility feature is not used in the claims, no patentable weight is given to this feature. The Examiner notes that any RFID tag, flexible or inflexible, could be used in the systems disclosed by the reference and the present invention without detracting from the method of inventorying the tags.

Claim 126: Walter and Verb disclose an inventory system as in Claims 104 above, and Walter further discloses the tag reader transmitting a wake up (Awake) signal (col 1, col 60-62 and col 2, lines 40-42).

Claim 128: Walter and Verb disclose an inventory system as in Claim 104 above, and Walter further discloses that the tags can receive and transmit signals (i.e. contain transceivers)(col 2, lines 30-35 and col 3, lines 43-50).

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Claims 129 and 140: Walter and Werb disclose an inventory system as in Claims 104 and 135 above, and Walter further discloses the tags evaluating the signal received from the tag reader and replying to the signal when appropriate (the correct value is in the corresponding bit)(col 5, lines 10-16).

Claim 130: Walter and Werb disclose an inventory system as in Claim 129 above, and Walter further discloses that the tag has a sensor (for receiving and determining status, i.e. Awake, Sleep, Isolated, etc.)(col 1, col 60-62 and col 2, lines 40-42) and means for transmitting the contents of said sensor (transceiver)(col 2, lines 30-35 and col 3, lines 43-50).

Claims 131, 141, and 142: Walter and Werb disclose an inventory system as in Claims 129, 135, and 140 above, and Werb further discloses the tag reader emitting a series of clock signals defining time slots (col 7, line 45 - col 8, line 5). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to transmit a synchronization signal to define time slots for receiving responses from the tags in Walter. One would have been motivated to use the synchronization signal in Walter to define time slots in order to ensure all of the tags were using the same "time data" on which to base their transmission delays as discussed by Werb.

Claim 132: Walter and Werb disclose an inventory system as in Claim 131 above, and Walter further discloses that each tag begins a count based on the clock signal (synchronization)(col 9, line 42 - col 10, line 10).

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Claim 133: Walter and Verb disclose an inventory system as in Claim 131 above, and Walter further discloses polling all tags whose reply conflicted with another tag (col 10, lines 11-32).

Claim 134: Walter and Verb disclose an inventory system as in Claim 131 above, and Walter further discloses that the tag reader can initiate an immediate read, a specific tag read, or a timed broadcast read of the tags (col 9, line 19 - col 10, line 32).

Claim 143: Walter and Verb disclose an inventory method which includes the steps of Claims 104 and 128 above, in which a tag reader performs multiple reads of the tags to avoid time slot contention (col 3, lines 10-23). Walter further discloses that the tags are identified by a plurality of bits (col 5 and 6, Table 1) and that a different bit is read during each of the multiple read cycles. While Walter does not explicitly disclose that a plurality of bits are read each time, Verb discloses a similar system and method for inventorying a plurality of electronic tags in which a tag is assigned a Unique Identifying Code (UIC) and that “the tag can be configured to send shorter transmissions more frequently”...”This shorter code might be as short as one bit long, and take just a few milliseconds to transmit” (col 14, lines 41-65). Therefore, it would have been obvious to one having ordinary skill in the art that in order to use different parts of the identification number for multiple reads, the identification number could be divided into subsets containing any number of bits from only one bit as Walter discloses to any number less than the total number as Verb discloses. One would have been motivated to use a plurality of bits in order

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to decrease the time it takes to identify a plurality of items when the identification number consists of a large number of bits as discussed by Werb.

While Walter discloses that a plurality of tags may respond at the same time, Walter does not explicitly disclose the use of “time slots” for the responses. However, Werb discloses using a synchronization signal modified by the tag’s UIC to determine the appropriate time slot in which each tag is to respond as one way to counter receiving signals from two or more tags simultaneously (col 12, line 39 - col 13, line 30). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize such a time slot contention resolution means with Walter’s tags. One would have been motivated to use time slots in order to decrease the chance that a plurality of tags would respond simultaneously.

Claims 144 and 145: Walter and Werb disclose an inventory method as in Claim 143 above, and Walter further discloses that the tag has a sensor (for receiving and determining status, i.e. Awake, Sleep, Isolated, etc.)(col 1, col 60-62 and col 2, lines 40-42) and means for transmitting the contents of said sensor (transceiver) for receipt by the tag reader (col 2, lines 30-35 and col 3, lines 43-50).

Claim 146: Walter and Werb disclose an inventory method as in Claim 143 above. Walter further discloses the tag reader transmitting a first value and a second value of a tag to be located, wherein the values are a first plurality of bits and a second plurality of bits (col 5, lines 6-9 and col 6, lines 10-57), and Werb discloses that the values are a first plurality of bits and a second plurality of bits (col 14, lines 41-65) as discussed in Claim 143 above.

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Claim 147: Walter and Verb disclose an inventory method as in Claim 146 above, and Walter further discloses the tag responding by transmitting its first and second plurality of bits when they correspond to the values transmitted by the tag reader (col 6, lines 10-57).

Claim 148: Walter and Verb disclose an inventory method as in Claim 147 above, and Walter further discloses the tag including a third plurality of bits, the tag reader transmitting the third plurality of bits to the tag, and the tag responding with the third plurality of bits when they correspond to the value transmitted by the tag reader (col 6, lines 10-57).

Claim 149: Walter and Verb disclose an inventory method as in Claim 148 above, and further discloses that the tag(s) are “connected to any object desired” (col 4, lines 45-53) and uses as an example a biological sample carried in a “flask, vile, case, pouch, or other container”. Verb also discloses that the tags “are attached to people and/or items being tracked” (col 3, lines 54-55). While neither reference explicitly discloses disclosed that the object to which the tag is attached is a product to be sold (i.e. merchandise), it would have been obvious to one having ordinary skill in the art at the time the invention was made to attach inventory tags to such items. One would have been motivated to attach tags to merchandise in order to facilitate the inventory of such objects and in view of Walter’s disclosure that the tags could be attached to any desired object.

Claim 150: Walter and Verb disclose an inventory method as in Claims 149 above, but neither reference explicitly discloses if the type of material being used in the manufacture of the tags is flexible or inflexible. However, since no reason is given in the claims of why the substrate

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material needs to be flexible and this flexibility feature is not used in the claims, no patentable weight is given to this feature. The Examiner notes that any RFID tag, flexible or inflexible, could be used in the systems disclosed by the reference and the present invention without detracting from the method of inventorying the tags.

Claim 151: Walter and Werb disclose an inventory method as in Claims 143 above, and Walter further discloses the tag reader transmitting a wake up (Awake) signal (col 1, col 60-62 and col 2, lines 40-42).

Claim 152: Walter and Werb disclose an inventory method as in Claim 143 above, and Werb further discloses the tag reader emitting a series of clock signals defining time slots (col 7, line 45 - col 8, line 5). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to transmit a synchronization signal to define time slots for receiving responses from the tags in Walter. One would have been motivated to use the synchronization signal in Walter to define time slots in order to ensure all of the tags were using the same "time data" on which to base their transmission delays as discussed by Werb..

Claim 153: Walter and Werb disclose an inventory method as in Claim 152 above, and Walter further discloses that each tag begins a count based on the clock signal (synchronization)(col 9, line 42 - col 10, line 10).

Claim 154: Walter and Werb disclose an inventory method as in Claim 143 above, and Walter further discloses that the tag reader can initiate an immediate read, a specific tag read, or a timed broadcast read of the tags (col 9, line 19 - col 10, line 32).

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Claim 157: Walter and Werb disclose a system for inventorying electronic tags as in Claim 104 above. Walter further discloses that the interrogator (tag reader) “include radiofrequency transceivers, memories and programmable or custom logic circuitry for receiving, responding and implementing the commands and operations of the methods just described” (col 2, lines 31-35). While it is not explicitly disclosed that the programmable or custom circuitry on which the application’s commands and operations are stored is contained on a PCMCIA card (i.e. PC Card), it is obvious that any suitable memory device to include PCMCIA cards could be utilize to effectuate the inventorying of the electronic tags in Walter. One would have been motivated to use a PCMCIA card or its equivalent in order to allow the physical device (tag reader) to be used for multiple purposes (e.g. a plurality of removable memory cards, each with various applications stored thereon).

Response to Arguments

6. Applicant's arguments with respect to claims 104 and 118-154 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. O'Toole et al (US2003/0099210) discloses an electronic tag which uses a clock frequency received from a radio frequency signal; to synchronize response time slots for the tag.

B. O'Toole et al (6,130,602 & 6,278,698) are patented parents of the above PG Pub and disclose an electronic tag which uses a clock frequency received from a radio frequency signal; to synchronize response time slots for the tag. These references consist of over 3300 pages each and are, therefore, not being forwarded to the Applicant. The Applicant may review these references on-line at the Patent Office website.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exr. James W. Myhre whose telephone number is (703) 308-7843. The examiner can normally be reached on weekdays from 6:30 a.m. to 3:30 p.m.

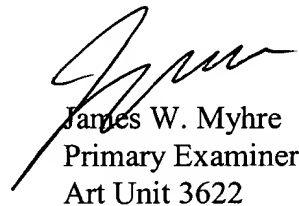
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Stamber, can be reached on (703) 305-8469. The fax phone number for Formal or Official faxes to Technology Center 3600 is (703) 872-9306. Draft or Informal faxes may be submitted to (703) 872-9327 or directly to the examiner at (703) 746-5544.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (703) 308-1113.



JWM
November 19, 2003



James W. Myhre
Primary Examiner
Art Unit 3622